Next generation satellites for weather forecasts

3938. SHRI B.J. PANDA:
MS. PRAMILA BOHIDAR:

Will the PRIME MINISTER be pleased to state:

(a) whether ISRO is planning next generation satellites that are more effective in providing data required for making more accurate weather forecasts;

(b) if so, the details thereof; and

(c) to what extent this would help provide reasonable prediction of monsoon and also help in disaster management system?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) and (b) Yes, Sir. ISRO is planning to launch an advanced dedicated meteorological satellite INSAT-3D with 6 channel high-resolution imager and 19 channel atmospheric sounder to provide temperature and humidity profiles, hitherto not available over our region for the meteorological community. Further, the launching of Indian Remote Sensing satellites, namely, Oceansat-2 with advanced Scatterometer for ocean surface wind vectors measurements, and the Megha Tropiques with advanced payloads for providing information pertaining to water and energy cycles in the tropics should further augment the meteorological data services significantly in the next few years. It is expected that by around 2009-2010, the full complement of Indian meteorological satellites will be in orbit and will be the state-of-the-art space systems.

(c) With the advent of the full complement of meteorological satellite systems, India will have a space-based synoptic observing capability for monitoring of weather related parameters such as cloud structures, humidity, temperature and wind. While such advanced meteorological satellites help to provide enhanced observational capability for improved meteorological services, an optimum combination of data from different sources including in-situ information is important to prescribe the atmospheric state with accuracy, reliability, frequency and coverage. Towards this, efforts are also being made to augment the ground-based system such as LIDAR, Doppler Weather Radars, Automatic Weather Stations and Agro-meteorological

towers. Assimilation of such vast amount of data into operational numerical weather prediction models is an important steps to improve the prediction of monsoons and aderse extreme weather events. Better understanding of the atmospheric processes will also help the disaster mitigation acivities for events such as cyclone, drought, and cloudbursts with timely early warning.

Manned mission to moon

3939. PROF. P.J. KURIEN: Will the PRIME MINISTER be pleased to state:

(a) whether India propose to send a satellite to the moon;

(b) if so, the details thereof;

(c) whether it also included sending a man to the moon;

(d) if so, the details thereof; and

(e) if not, the reasons therefor?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) Yes, Sir.

(b) Chandrayaan-1 is India's first unmanned mission to moon with scientific objective of high resolution mapping of topographic features and the study of the mineralogical composition of the lunar surface. The spacecraft will orbit moon at an altitude of 100 km to be launched in 2008 using PSLV. The mission is expected to have an operational life of about 2 years.

(c) No, Sir.

(d) Does not arise.

(e) The technologies related to manned mission are yet to be developed.

Indian mission to moon

3940. SHRI SURENDRA LATH: Will the PRIME MINISTER be pleased to state:

(a) whether the first Indian moon mission Chandrayaan-1 was approved in 2003;